

REMARKS**Summary of the Office Action**

The drawings stand objected to because Figure 8 allegedly should be designated by a legend such as "Prior Art."

Claims 1-4 stand rejected under 35 U.S.C. § 102(b) for allegedly being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Glenn et al. (U.S. Patent No. 6,571,466) (hereinafter "Glenn").

Claims 1-4 and 6 stand provisionally rejected under the judicially created doctrine of non statutory obviousness-type double patenting as being unpatentable over claims 1-2 of co-pending application no. 10/573,468 (U.S. Pub. No. 2007/0272998) in view of Tomita et al. (U.S. Patent No. 7,274,101) (hereinafter "Tomita").

Claim 5, while objected to as being dependent upon a rejected base claim, would be allowable if rewritten in independent form.

Summary of the Response to the Office Action

Applicants have amended independent claim 1 and claim 6 to differently describe embodiments of the disclosure of the instant application and/or to improve the form of the claims. Accordingly, claims 1-6 remain currently pending and under consideration. Also, a Submission of Replacement Drawing Sheets is concurrently filed incorporating an amendment to Fig. 8.

Objection to the Drawings

The drawings stand objected to because Figure 8 allegedly should be designated by a legend such as "Prior Art." In the Submission of Replacement Drawing Sheets filed concurrently herewith, Applicants have amended the drawings by labeling Fig. 8 as "Prior Art" in response to the drawing objection at page 2 of the Office Action. Accordingly, Applicants respectfully request that the objection to the drawings be withdrawn.

Double Patenting Rejection

Claims 1-4 and 6 stand provisionally rejected under the judicially created doctrine of non statutory obviousness-type double patenting as being unpatentable over claims 1-2 of co-pending application no. 10/573,468 (U.S. Pub. No. 2007/0272998) in view of Tomita. However, Applicants respectfully submit that claim 1 of 10/573,468 application defines a "wettability property" as the main subject matter. On the other hand, the present application does not define such a feature. As a result, Applicants believe these claims are different from each other. Even further, the applied Tomita reference does not appear to qualify as prior art against the instant application. For example, the effective filing date of June 27, 2005 of Tomita does not predate the international filing date of September 24, 2004 of the instant application. Accordingly, Applicants request that the double patenting rejections be withdrawn for at least the foregoing reasons.

Rejections under 35 U.S.C. § 103(a)

Claims 1-4 stand rejected under 35 U.S.C. § 102 (b) for allegedly being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Glenn. To the extent that these rejections might be deemed to still apply to the claims as newly-amended, the rejections are respectfully traversed for at least the following reasons.

According to independent claim 1 of the instant application, Applicants respectfully submit that the recess (thinned portion) (14) in Fig. 1 is formed at light incident side of the substrate (10). That is, this device is a back-illuminated semiconductor device as defined in newly-amended claim 1.

Applicants respectfully submit that Glenn does not show a back-illuminated semiconductor device. The photodetecting portion (106) of Glenn is formed at light incident side, as shown in Fig. 10. In other words, no recess is formed at light incident side in Glenn.

The resin (32) of the instant application surrounds four sides of space under the surface (S3) to reinforce the substrate and the device disclosed in the instant application further comprises small outlets (26b, 27b) for air as shown in Figs. 2 and 3. According to paragraph [0034] of the specification of the instant application, “[i]n this case ... thinned portion 14 may become distorted due to expansion or contraction of the air inside the sealed space during heating or cooling in the process of curing the resin, etc.”

Accordingly, Applicants respectfully submit that the device disclosed in the instant application comprises communicating portions (26b, 27b) for the air in order to prevent the warpage of the substrate. Applicants respectfully submit that Glenn does not teach, or even suggest, such communicating portions (grooves).

Further in this regard, Applicants respectfully submit that there is no "air" in the space between the elements (104) and (1002) in Fig. 10 of Glenn. Col. 5, lines 59 to 61 in Glenn teaches that "[a]ctive area 106 of image sensor 104 is located and hermetically sealed within cavity 118." Otherwise, Glenn discloses that it is sealed by a "hardened transparent liquid encapsulant." See also col. 7, lines 1 to 3, Figs. 10 & 14B of Glenn.

Therefore, Applicants respectfully submit that there is no reason for providing a communicating portion on the substrate in the disclosure of Glenn because there is no air in the space. Therefore, Applicants have concluded that a person having ordinary skill in the subject art would not easily derive the advantageous combination of features described in newly-amended independent claim 1 of the instant application from the cited references.

Accordingly, Applicants respectfully assert that the rejections under 35 U.S.C. § 103(a) should be withdrawn because Glenn does not teach or suggest each feature of independent claim 1 of the instant application. As pointed out by MPEP § 2143.03, "[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)." Since the prior art does not disclose or suggest any of the combinations recited in Applicants' claims, and if anything appears to teach away from the current claim recitations, KSR Int'l Co. v. Teleflex Inc., 127 S.Ct. 1727 (2007), Applicants submit that such recited combinations would not have been obvious in view of the applied references of record, whether taken alone or combined in the manner suggested by the Examiner in the Office Action.

Furthermore, Applicants respectfully assert that the dependent claims 2-6 are allowable at least because of their dependence from newly-amended independent claim 1, the

reasons discussed previously, and the additional features that they recite. For example, Applicants respectfully submit that no groove, as defined in dependent claim 2, is formed in Glenn. The Examiner asserts in the Office Action that Fig. 10 of Glenn discloses communicating portions that are groove portions 1006 formed on the wiring substrate 1002. However, Applicants respectfully submit that there is no such groove portion in Fig. 10 of Glenn for at least the foregoing reasons.

Applicants have concluded that a person having ordinary skill in the subject art would not easily derive the advantageous combination of features described in the claims of the instant application from the cited references.

CONCLUSION

In view of the foregoing amendments and remarks, withdrawal of the rejections and allowance of all pending claims are earnestly solicited. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicants' undersigned representative to expedite prosecution. A favorable action is awaited.

EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. § 1.16 and 1.17 which may be required, including

any required extension of time fees, or credit any overpayment to Deposit Account No. 50-0573.

This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

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